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XII. MUSIC

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A. Murray Island.

1. Introductory.

The songs of the Miriam or Murray Islanders, which form the subject of this section, are of considerable interest from the standpoint of musical history and development. For they differ among one another not only in complexity of structure but also in date of composition and place of origin. They thus afford an opportunity of tracing the changes in musical expression which may occur in course of time within a primitive community. They also shew evidence of the great traffic in tunes which may go on between the inhabitants of neighbouring islands, thus raising the general question as to how far the fundamental characteristics of the music of a given people are fixed or are modifiable, temporarily or permanently, by the importation of foreign airs.

The primitive character of Murray Island music is sufficiently attested by the fact that the drum is probably the sole native instrument the islanders possess; at all events the drum is the only instrument ever used as an accompaniment to their tunes, and then only in ceremonial and dance music. Flutes, pan-pipes and jews' harps are occasionally seen, the first possibly introduced by visiting South Sea Islanders, the two latter coming from New Guinea (see following section). But they are now seldom played upon and are never used in orchestral combination or at musical festivals: they have evidently exerted little or no influence on Miriam music.

The compass of the majority of the Miriam male voices is baritone. A few have a light bass voice; but none could be described as having a true tenor. At times, however, they pitch their songs (especially their Christian hymn-tunes) so high, that their voices are forced into an artificial compass. The songs which are about to be described were sung by men only. There are doubtless children's and women's songs, but these were not heard or recorded during the stay of the Expedition. In church, the women emit the most piercing treble notes; the *tempo* is excellent, but the volume and quality of the sound are very unpleasant and there is a general tendency to lower the pitch in the course of the hymn.

By the aid of a phonograph records of many songs were secured, and of these twenty have been subjected to detailed examination. Some of the songs are religious and ancient, others secular and relatively modern. Of the secular songs, some are sung at games, others at dances. Unfortunately no songs, specially designated as dance songs, were recorded, but from what could be ascertained during our visit it is probable that any favourite non-sacred tune (cf. Song XIII A, p. 246) could be sung at dances. The rhythm of the songs actually performed during dancing was strikingly independent of that of the dancers' movements. In the dance the drum appeared of more importance than the melody.

There can be no doubt that the tunes belonging to their religious ceremonials have not been affected by contamination with European music. It is true that hymn-tunes sung in the Miriam church have been introduced by Christian missionaries during the last 35 years, and that lately one or two tunes have been brought into the island from the Salvation Army at Thursday Island. But the songs of the Malu cult were so sacred that no native woman or child might hear them; indeed no white man had ever heard them before the arrival of the members of our Expedition. It was only with the greatest difficulty that the natives were induced to sing them.

In other words, the Malu songs were sung so seldom and so secretly that it is impossible to believe that modern European music had affected them. In securing the records for the phonograph, great care, moreover, was taken to ensure that they were obtained from the older men who were alive in the times when the ceremonies were still being performed, of which these songs formed part. The other ceremonial songs were probably also sacred. Traces of European influence may be suspected in one or two of the secular songs, but the evidence is not strongly in favour of this view.

2. Origin and Classification of the Songs.

The first four songs are songs of extreme solemnity belonging to the Malu funeral ceremonies. They have already appeared in these *Reports* (Vol. VI. pp. 151, 152). The circumstances and manner in which they were sung are there described (*ibid.* pp. 145, 146, 312, 313), and the translation of the words, so far as that was possible, is also given (*ibid.* pp. 299, 300).

Song I was sung into the phonograph by Ulai. Of Song II three records are available, of which two were sung by Ulai and one by Gasu. The two records of Song III were sung by Ulai and Wanu. Song IV was sung by Enoka.

Song IV A was sung during the exhibition of the sacred masks of Bomai and Malu (Vol. VI. pp. 289—292, 306—308), and again during the dance of the Bezam Boai (*ibid.*

pp. 309, 310). The translation of the various words sung to this air has already been given (*ibid.* pp. 297, 298[1]), and is here re-printed (see Appendix). Three records of this tune have been obtained, two of which were sung by Ulai and Gasu.

Songs V—XII have also been published (Vol. VI. pp. 152, 153). They belong to the *keber* ceremonies (*ibid.* pp. 126—144). Songs VI[2], VII, X[2] appear to have been connected with the *zera markai* (*ibid.* pp. 133, 134), Songs VIII and IX[2] with the *meket siriam* (*ibid.* pp. 142, 143, 273, 274). These two songs were sung into the phonograph by Wanu. Joe Brown and Ulai were responsible for most of the others. Song XIII is an old song from the island of Dauar, sung by Gasu. Perhaps Song XIII A may be included in this group of songs. It was sung at the funeral of a *nogle* ("one of 'the people,' who was not *zogole* or *tamileb*"). But it was also used as *babanet*, i.e. as a prelude to a dance. The words were introduced from Tutu.

Songs XIV and XV are sung while the natives are sitting in a circle spinning their *kolap* or tops (see section on Games). Song XVI was composed by a woman named Akoko; it was described as "a new song from Las." Joe Brown who sang Song XVII claimed to have composed it. Song XVIII appears to have been introduced by Boa. It is said to have been known at Tutu. The words of these twenty songs are translated into English, so far as possible, on pp. 266—268.

The songs conveniently fall into three divisions, the Malu songs (I—IV A), the *keber* songs (V—XIII A), and the "secular" songs (XIV—XVIII). That the Malu songs have been sung in Murray Island for a longer time than the *keber* songs admits of no doubt whatever. It was Waiet who introduced the ceremonies of the *zera markai* and the *keber*. The natives emphatically state that Waiet came after Bomai and Malu, and that he came from the western islands (Vol. VI. pp. 279, 280).

A study of the words of the Malu and of the *keber* songs confirms this estimate of their relative age in Murray Island. With one or two exceptions the words of the Malu songs clearly belong to the language of the eastern islands. These songs thus present a striking contrast to the *keber* songs which, with the exception of Song XI, are invariably in the western language. Mr Ray finds many obsolete words and forms of grammar in the words of the Malu songs: he has dealt with this subject at length in Vol. III. p. 51. The original significance of the Malu songs is for the most part forgotten by the Murray Islanders of the present day. They describe some of the words as "Malu words," and attempt to translate them into the vernacular (Vol. VI. pp. 296, 297).

Inasmuch, on the other hand, as the words of all the *keber* songs (save Song XI) belong to the language of the western islands of the Torres Straits, they are naturally even less intelligible than those of the Malu songs to the Murray Islanders. The same feature characterises the majority of the secular songs. These are said to be introduced from the western islands of the Torres Straits or from Saibai, often during the voyages made by the Murray Islanders while serving on the luggers engaged in the pearl-shell industry. The original words of these songs are more or less correctly retained on their introduction into Murray Island, but their meaning is lost. The Murray Islanders appear

[1] By mistake the words "Air 1, p. 151," "Air 1," "Air 1, p. 151," appear on these two pages over the translation of the words sung during the exhibition of the sacred masks. The only words sung to the first song are those given and translated on p. 299.

[2] I was unable to obtain the words for these songs; cf. p. 268.

invariably to attach little or no importance to the words of their song; they would often say, "it is only the music that matters."

It was seldom that a Miriam (i.e. Murray Island) origin was claimed for the secular songs, but in some instances this claim appeared questionable upon enquiry. For example, Boa declared himself the composer of Song XVIII. Yet the words are clearly of the western language. They were admittedly known at Tutu, and seem to have been introduced from Muralug. Similarly Song XV was given to me as composed by Matud, a Murray Islander then deceased. But later it turned out to have been introduced by Matud from Erub whither it had been previously brought from Masig; Matud sang it first at a Miriam marriage-feast.

The words of seven secular songs, the music of which was not recorded, were also obtained. Of these three came direct from Tutu, a fourth from Saibai, a fifth from Aurid or Masig, while a sixth was traceable from Masig, thither from Purem (Paremar), and finally from Tutu. The words of these songs are given in the section on Songs; they are in the language of the western islands.

But it is difficult to accept the conclusion, which the evidence thus adduced appears to indicate, that the modern music in Murray Island is *entirely* of exotic origin. There is still the possibility that the Murray Islanders may often have made use of the incomprehensible language of the western islands (to the words of a song, as has been already pointed out, they attach no importance) and set them to their own music. This possibility is strengthened by the words of one song (tune not recorded) which were said to have been brought from Tutu (indirectly from Saibai) "when Oroto was ten years old" (about 35 years ago) by men who happened to be sailing under Douglas Pitt, a West Indian owner of a pearl-shelling lugger. "Akoko then made new music to those words." Akoko, it will be remembered, claimed (p. 240) also to have composed Song XVI, the words of which are in the Murray Island language. She was said to dream new songs while asleep, and was evidently recognised by her fellow-islanders as a composer of music. Joe Brown also appears as the composer of Song XVII, one of the words of which is also in the Murray Island language; when younger, he had the reputation of being the best singer on the island.

It is conceivable that after long familiarity with the songs and words borrowed from the western islands, the Murray Islanders fell into the habit or adopted the fashion of singing incomprehensible words to their own music. The words of the Malu songs, as we have already explained, are so archaic and symbolic as to have long lost most of their meaning; it is therefore not so strange if the custom has grown up of singing the words not merely of the *keber* but also of the secular songs in the (more or less distorted) language of the western islands. We may reasonably look on the Malu songs as representing ancient Miriam music[1]. The question arises, of course, as to how far the *keber* and the secular songs may be respectively regarded as specimens of "medieval" and "modern" Miriam music. If once it be admitted,

[1] It will be remembered that the cult of Malu was introduced from the west, possibly indeed originally from New Guinea (see these *Reports*, Vol. VI. p. 282), but at such a remote epoch that we may regard the Malu tunes as virtually representative of ancient Miriam music, even though the introducers of the cult brought their tunes with them.

as I think it must, that some of the modern secular songs are written by Murray Island composers to the western and a few to the eastern language of the Torres Straits, it may well be that other tunes which purported to have come from the western islands really have a Murray Island origin. For aught we know to the contrary, it may be that only the *words* of many of the *keber* songs were introduced, and that the *music* was composed by the Murray Islanders, or that, at all events in course of time, it became modified to suit their aesthetic needs. If this hypothesis be accepted, the Malu, the *keber* and the "secular" music may be regarded as representing three different stages in the development of music in Murray Island. At the same time, however, it must be doubtless admitted that the characteristics of these three kinds of music have been determined or influenced by the free communication of the inhabitants with the western and other islands of the Torres Straits.

3. Methods of Analysis.

The twenty songs which are now to be closely examined have been studied from phonographic records, by aid of a metronome and an Appun's Tonmesser which consists of a box of metal tongues any one of which can be made to vibrate at will by means of air driven from bellows. The tongues are carefully tuned so as to give tones which are successively different by two vibrations. The box contains 65 tongues giving as many tones ranging from 128 to 256 vibrations per second. The pitch of the tones emitted by such tongues is remarkably constant, despite the inevitable variations in temperature and in wind pressure.

A given song is first written down approximately in European notation. It is next subject to more careful examination. The pitch of the more important and more prolonged notes is determined as accurately as possible by means of the Tonmesser. Any one tone can be prolonged on the phonograph by holding up the lever which usually rests on the spiral steel thread and is driven along it. When this lever is held up, the glass style remains stationary instead of travelling along the spiral groove cut in the wax cylinder. The mean of several determinations, made both by upward and downward changes in the tones of the Tonmesser, is taken as the required pitch. The *tempo* and rhythm of the song, and of the accompanying drum beats when present, are at the same time noted by aid of the metronome.

Then the quotient or ratio of the vibration numbers of successive different notes is calculated, so as to determine the interval between them. Supposing that two consecutive notes are of 200 and 300 vibrations respectively, the quotient becomes 1·5. The higher tone is always selected as the numerator, so as to express the quotient in the form of a whole number.

The size of the interval is also estimated in cents[1]. A cent is the hundredth part of our tempered semitone; hence an octave is divisible into twelve hundred cents. For purposes of comparison of the ratios and cents hereafter calculated from the records, the following table may be useful:

[1] These are readily calculated from the interval ratios by the aid of the tables given by the late A. J. Ellis in his edition of Helmholtz's *Sensations of Tone*, London, 1895, pp. 446—451.

Interval	Quotient	Cents
Tempered semitone	1·059	100
Just semitone (15 : 16)	1·06̇	111·731
Just minor tone (9 : 10)	1·111	182·404
Tempered tone	1·122	200
Just major tone (8 : 9)	1·125	203·910
Tempered minor third	1·189	300
Just minor third (5 : 6)	1·200	315·641
Just major third (4 : 5)	1·250	386·314
Tempered major third	1·260	400
Just fourth (3 : 4)	1·3̇	498·045
Tempered fourth	1·335	500
Just tritone (32 : 45)	1·406	590·224
Tempered tritone	1·414	600
Tempered fifth	1·498	700
Just fifth (2 : 3)	1·5	701·955
Tempered minor sixth	1·587	800
Just minor sixth (5 : 8)	1·6̇	813·687
Just major sixth (3 : 5)	1·6̇	884·359
Tempered major sixth	1·682	900
Just minor seventh (9 : 16)	1·7̇	996·091
Tempered minor seventh	1·782	1000
Just major seventh (8 : 15)	1·875	1088·269
Tempered major seventh	1·888	1100
Octave (1 : 2)	2·0	1200

We shall employ the usual nomenclature in referring to the names of the musical notes, the tones in the middle octave of the piano being written as c', d', $e' \ldots b'$, those in the two octaves immediately below it being written as $c^\circ \ldots b^\circ$, $C_\circ \ldots B_\circ$. The letter b is employed with the customary English signification.

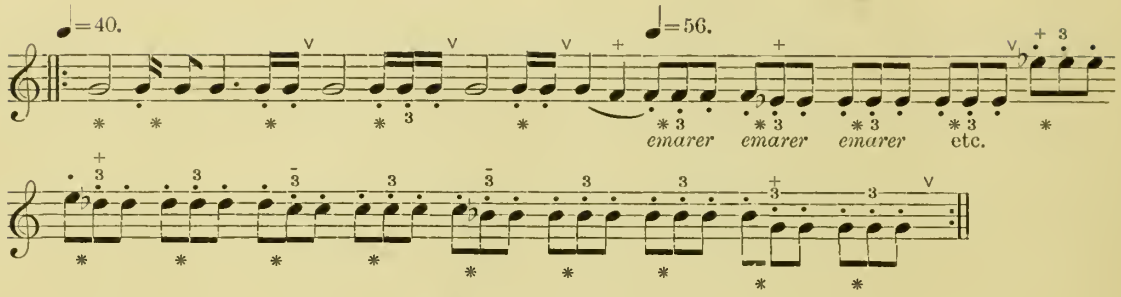
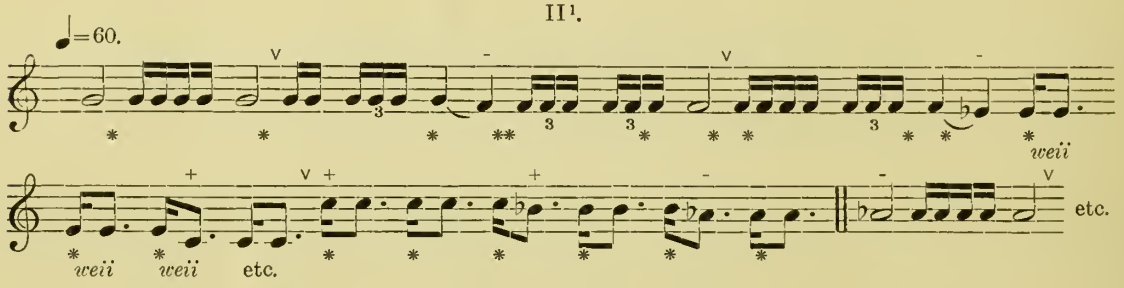
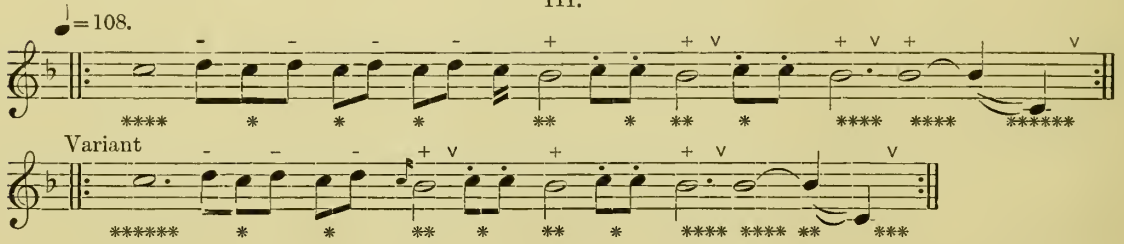
The numbers and letters which we shall hereafter use having been thus explained, a few observations remain to be added as regards the notation of the songs. Of the five Malu songs four have already appeared in musical notation in Vol. VI. (pp. 151, 152) of these *Reports*. The fifth Malu Song IV A was performed during the exhibition of the sacred masks and during the dance of the Beizam Boai after the initiation ceremonies. Only the words of this song have been published in Vol. VI. pp. 297—299, where by error in each case they are ascribed to the air of Malu Song I. The notation now presented does not always tally exactly with the earlier version, which was intended only to convey to the European a rough idea of the character of the songs[1]. In this section an attempt is made to give a more exact value to the pitch and duration of each note. The sign + or − over a note means that the pitch of the tone is slightly higher or lower than would otherwise be indicated[2]. The sign ∨ indicates a breath pause. Asterisks denote the drum beats. A number of asterisks massed together implies that the drum is beaten as rapidly as possible. When two notes are connected by two ties (e.g.), a well-marked *glissando*, or continuous change of pitch in passing from the one note to the other, is indicated. The songs are for convenience sake written an octave higher than they were actually sung.

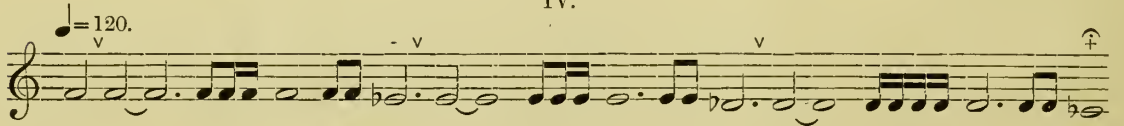
[1] No attempt has been made to convey a very accurate idea of Song IV A. It was felt that a more elaborate system of notation would do more harm than good.

[2] The sign + or − is not repeated when successive repetitions of the same note occur.

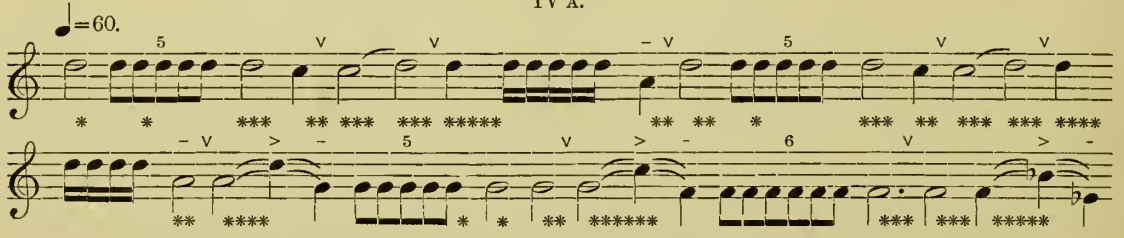
4. The Songs transcribed in Musical Notation.

MALU SONGS.

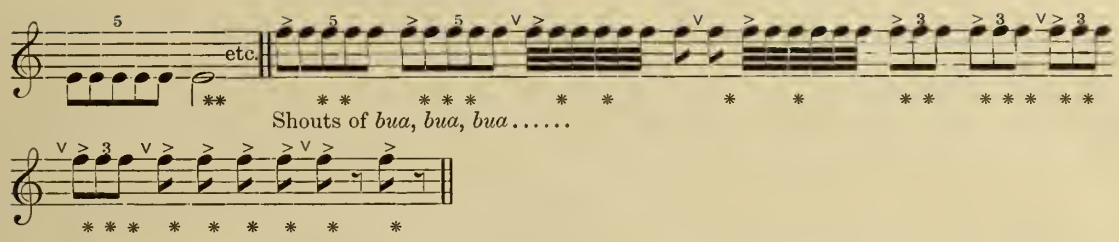
I[1].

II[1].

III.

IV.



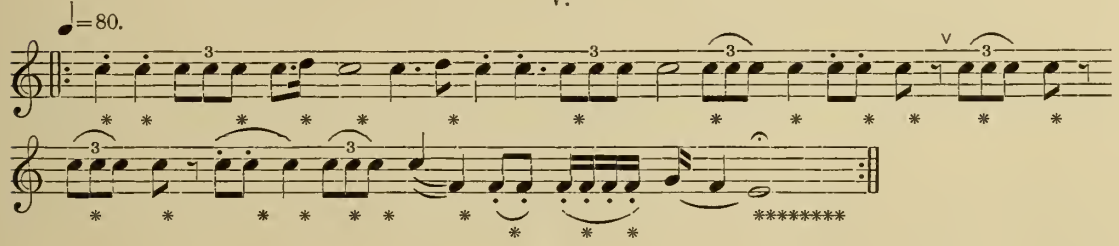
IV A.



[1] On the pianoforte the notes of this song are best playable as a series of descending whole-tones.



KEBER SONGS.

V.

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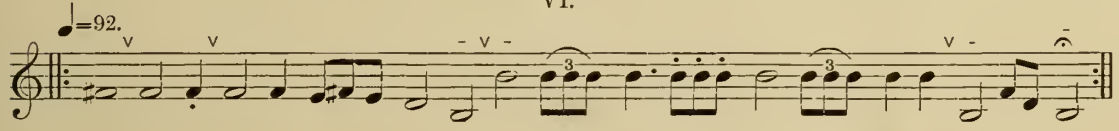
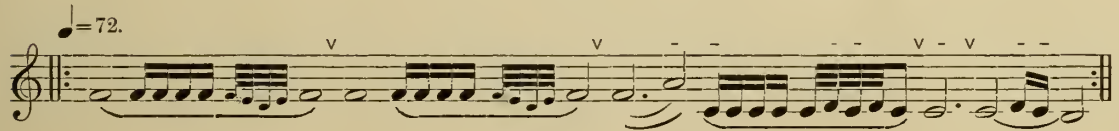


VII.



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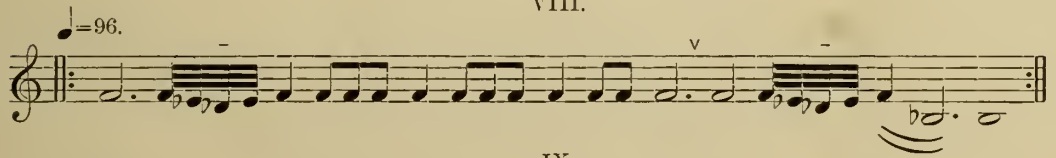
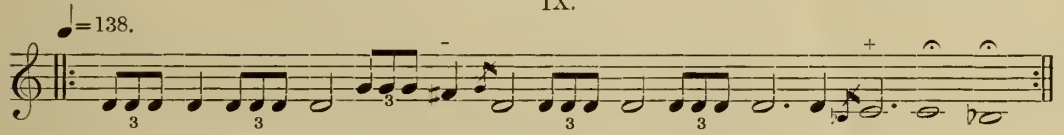
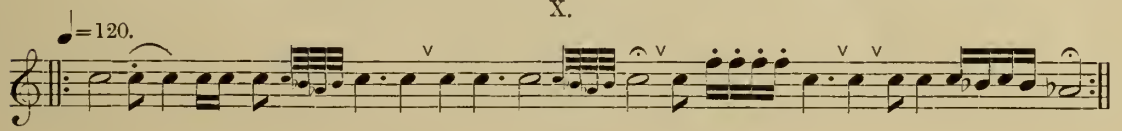


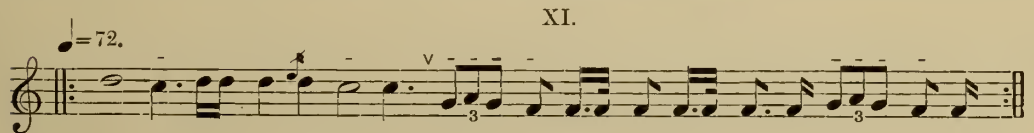
IX.



X.



XI.



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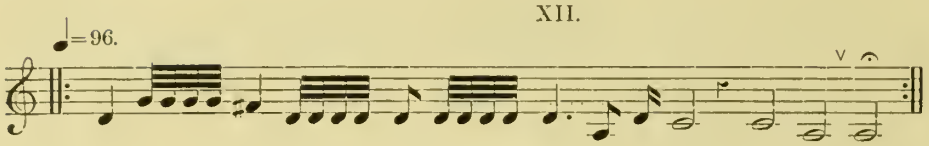

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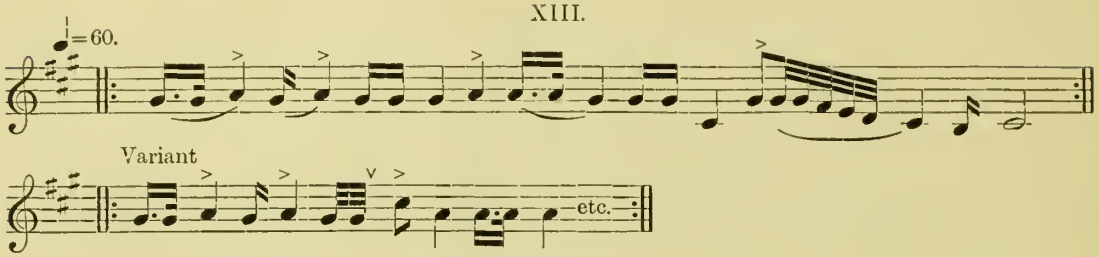
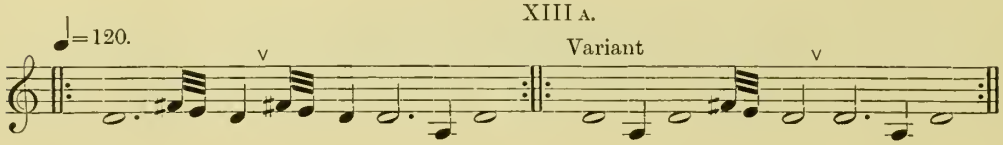
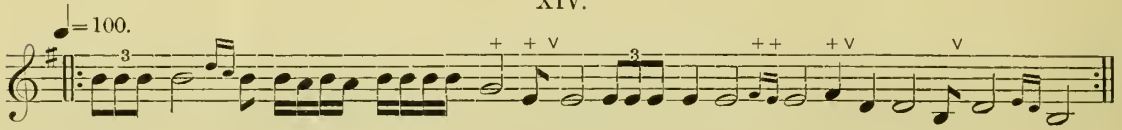

XIII A.

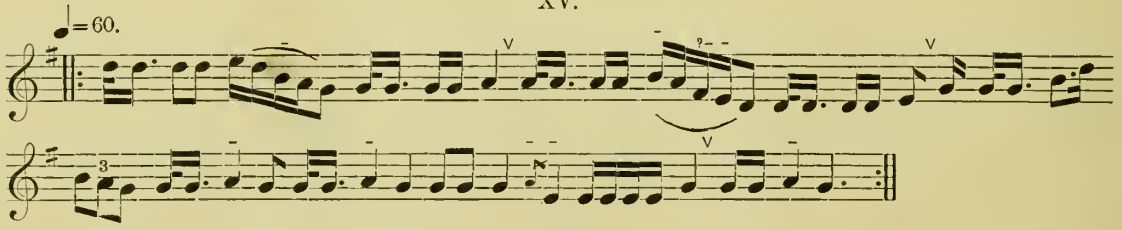


SECULAR SONGS.

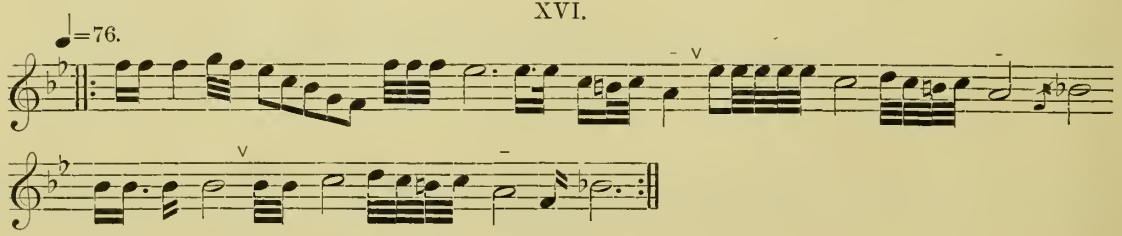
XIV.



XV.



XVI.



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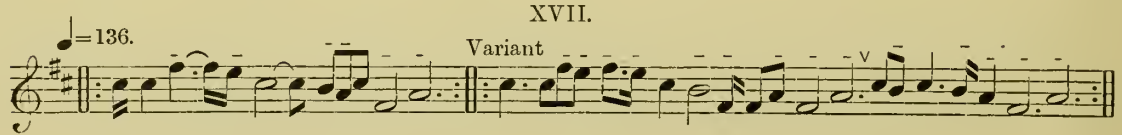
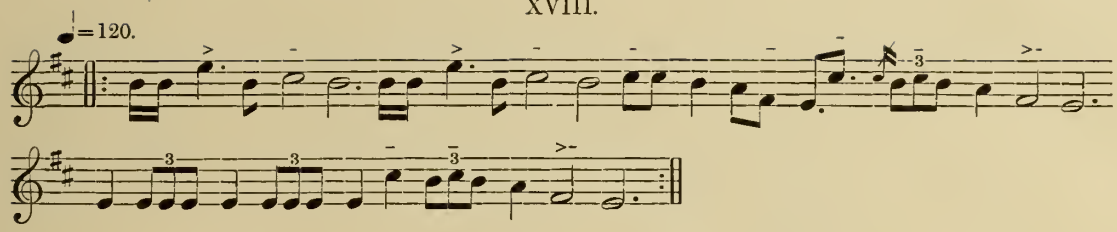

XVIII.



5. Detailed Analysis of the Songs.

Song I. This song consists of a descent through a succession of intervals, each of which (with the exception of the last) is slightly smaller than our whole tone. When the descent has been made approximately through an octave, the verse is repeated. A sudden rise to an octave may occur anywhere in the song when the pitch has become uncomfortably low for the singer. The successive intervals between the notes used have the following values:

Vibration-ratios	1·118	1·102	1·122	1·108	1·121	1·138
Cents	193	168	199	179	197	224

We have a succession of alternate larger and smaller intervals, averaging 196 and 173 cents, none exceeding our whole tone, excepting the last where a larger interval is employed apparently in order to reach (approximately) the pitch of the original starting note.

If we could treat these differences in size of successive intervals as due to accident, we might suppose that it was the purpose of the singer to descend by six intervals, each of 200 cents, until the octave had been completed. But, as we shall presently see, this conclusion is not warranted by other facts.

It is, however, certainly the case that a distinct recognition of a "principal tone" (? = tonic) appears in this song, but the function of this tone is not so much to end as to commence and recommence the melody. Each repeated verse starts with the principal tone, and the descent is continued until this tone is reached once more. The following values in cents are the distances of the successive descending tones from the principal tone:—0, 193, 361, 560, 739, 936, 1160.

The drum beats are sounded just after the note to which they belong. The rhythm of the song is not strictly regular until the words *emarer, emarer,* etc. are reached. The drum beat is sounded just between the syllables *em* and *ar.* The *tempo* is increased at the start of the descent and remains constant until the song is restarted.

Song II. This song is closely similar in construction to the previous one. The transcript here published is derived from the only record of several available, which was distinct enough for the pitch of the notes to be accurately determined. In two verses even of this record I had to be content with determining the interval between say two tones *a* and *c,* omitting the interval between *a* and *b,* and between *b* and *c,*

owing to the insufficient audibility of *b*. The following table gives the successive intervals in cents employed in different verses in the same record:

						Total descent
Verse I.	←——649	——→	209	250		1108
Verse II.	196	204	←—— 522 ——	→	234	1156
Verse III.	212	201	242	212	272	1139
Verse IV.	212	219	227	219	?	?
Average	207	208	240	227	252	1134

The following values in cents represent the distances of the various notes from the initial note, the latter being given the value zero:

0 207 415 655 882 1134

Here the range traversed is still less exactly an octave than in the former song. Indeed it approximates more nearly to eleven semitones (1100 cents) than to six whole-tone intervals.

The basis of division, moreover, is different. In Song I, it will be remembered, an interval of 1160 cents was divided into six intervals. In this song an interval of 1134 cents is divided into five intervals. In both songs the last interval is larger than the rest, apparently in order to reach approximately the pitch (octave differences being allowed for) of the initial note.

The drums are sounded as in the first song. The *tempo* remains fairly constant throughout the song.

One of the several versions obtained of this song follows the record here published, descending (with an octave rise) through eleven semitones, the second verse being sung a semitone higher than the first, and the third being similarly sung approximately a semitone higher than the second.

In another rendering the song began on d' and descended to B_0 without any octave rise during the descent. The second verse began again on d', descending to $d'\flat$.

In another rendering the song began on c', descending (with an octave rise) so as to begin the second verse on b'. In this verse the tune descended past the octave to below G_0. The third verse began on d' and descended (with octave rise) so that the fourth began on $e'\flat$.

These several versions shew how variable are the intentions of the singers and how inaccurately they execute their intentions.

From a study of these two songs there seems little doubt that the general aim of the Murray Island singers was to descend through successive intervals until the song could be begun again at the initial pitch. In the second song, however, the size of the interval is distinctly larger than in the other, so that the octave is traversed by five steps in this, by six steps in the first song. This difference in subdivision is made clear in the following diagram:

Song III. This extremely simple song consists only of three notes $B_{\circ}\flat$, $c°$, $d°$, with a broad descent *glissando* at the end of each verse. It begins with a prolonged $c°$ and, after the intervention of the unimportant ascent to $d°$, descends to $B_{\circ}\flat$. I have two records (A and B) of this song sung by different natives. The following table gives the vibration-ratios of the two intervals formed between these three notes in four verses of the song:

	Record A.		Record B.	
	$c°—d°$	$c°—B_{\circ}\flat$	$c°—d°$	$c°—B_{\circ}\flat$
	1·112	1·079—1·090	1·113	?
	1·112	1·096— ?	1·101	1·121—1·092
	1·115	1·083—1·106	1·130	? —1·109
	1·109	1·088—1·110	1·137	1·073—1·106
Average	1·112	1·087—1·102	1·120	1·094—1·102

The interval $c°—B_{\circ}\flat$ occurs three times in each verse and varies each time in size, generally increasing as the interval is repeated. Both tones tend to rise absolutely in pitch, the second more than the first.

The average value of the interval $c°—d°$ is 190 cents, while the interval $c°—B_{\circ}\flat$ varies from 153 to 167 cents. We may perhaps suppose that the final or larger value gave the singer most satisfaction and represents the interval he really intended to sing. It will be noted that the values 190 and 167 closely agree with the two different values of the interval used in descending the octave in Song I, viz. 196 and 173 cents.

The final, resting, note (? = tonic) is clearly $B_{\circ}\flat$. Hence we have a scale of three notes, $B_{\circ}\flat$, $c°$, $d°$, the distance of successive notes from the tonic being 167 and 357 cents.

The *tempo* of this song is not strict. The drum beats follow the enunciation of the syllable to which they belong. The long notes are accompanied by a rapid series of beats, again not beginning until after the note has been sounding for a short time.

Song IV. This record contains a descent of a large fourth by four notes. The three intervals thus sung have the vibration-ratios of 1·135, 1·104, 1·098, equivalent to 219, 172, 162 cents respectively.

Reckoned from the initial note, the intervals consequently have the following cent-values:

0 219 391 553

It is curious, but probably accidental, that the interval between the first and third notes (391 cents) is almost exactly that of a just major third.

Probably the lowest note is accidentally sharpened owing to its very low pitch. It is obvious from the record that the performer had great difficulty in singing it.

The number of descending intervals appears to be entirely at the discretion of the singer. Sometimes fewer or sometimes more were sung than occurred in the one record which it was possible to investigate with care. Ultimately so low a note was reached that the singer stopped; he then whispered the sacred words given on p. 267.

Song IV A. This is a very interesting song, in many respects different from the other Malu songs. It is far livelier in character, and the characteristic intervals instead of being whole tones are fourths and fifths.

Apart from the opening phrase, which is repeated, it consists essentially in an ascending *glissando* through an interval approximately of a fourth and in descending by an exceedingly drawn out *glissando* approximately through a fifth to a prolonged note. This rise to a fourth and descent through a fifth are repeated, the pitch being consequently lowered by about a tone after each repetition, until the song becomes too low for the performers to sing it, or until the words belonging to it have been exhausted. A series of sacred words (see p. 267) are then whispered and the song ends with a number of short high-pitched shouts, *bua, bua, bua,* as indicated in the transcript.

Consequently it is possible to maintain that in this song we are observing the evolution of whole-tone intervals, since a series of (approximately) whole tones is obtained from the successive rises through fourths and falls through fifths. I have little doubt, however, that this idea is incorrect (see p. 260).

Four records of this song are available, which will be called A, B, C, D. They were sung by different singers.

We may consider the intervals occurring in this song under five heads: (i) the whole tone ascended and descended in the opening phrase, (ii) the approximate whole tone separating the different repetitions of the main tune, (iii) the abrupt fall through a fourth occurring in the opening phrase, (iv) the *glissando* rise to a fourth, (v) the *glissando* fall through a fifth, the last two in the main part of the tune. The first four intervals may be considered together in successive pairs, the last separately. The quotients for the first pair are as follows:

	A	B	C	D
(i)	1·125	1·134 1·118	?	1·143
(ii)	1·132	1·131		1·135
	1·118	1·125	?	1·067
	1·115	1·128		1·118
		1·069		
Average	1·123	1·118		1·116
Equivalent to	201	193 cents		190 cents

The mean of these three means is 195 cents, an interval closely identical with the larger of the two intervals with which we have met in Songs I and III.

The following table gives the quotients for the second pair (iii) and (iv):

	A	B	C	D
(iii)	1·360	1·357 1·339	?	1·389
(iv)	1·314	1·321	1·443	?
	1·382	1·333	1·301	1·423
	[1·529]	1·375	?	?
	[1·508]	[1·526]	?	?
	[1·421]	[1·466]	?	?
	[1·400]	—	—	?
Average	1·416	1·388	1·372	1·406

The average for the above intervals of (iii) and (iv) amounts to 1·399 or 581 cents, a slightly flattened tritone (32 : 45).

It will be noted that the intervals in (iv) tend to become larger and more uncertain towards the end of the song. This was noticeable in all the heard versions of the song, and may be ascribed in part to carelessness and in part to the increasing lowness of pitch of the note from which the rise to a fourth was taken. The note became so uncomfortably low that the singer evidently exaggerated the rise in his effort to get away from it.

If we omit the intervals (bracketed in the above columns) due to these causes the average amounts to 1·361. Precisely the same average is reached if we limit ourselves to the fourth sung (without *glissando*) in (iii). The ratio 1·361 amounts to 534 cents.

Similar difficulties attend the exact determination of the remaining interval used in this song, the *glissando* descent through an approximate fifth. The two intervals bracketed below should certainly be excluded; their smallness is obviously due to the fact that the singer had reached so low a pitch that the descent through the required interval was quite beyond his power.

	A	B	C	D
(v)	1·487	1·495	1·612	?
	1·544	1·500	1·506	1·519
	1·705	1·551	?	?
	1·521	1·630	?	?
	[1·433]	—	—	?
	[1·461]	—	—	—
Average	1·552	1·544	1·559	1·519

The average of all the intervals (those bracketed being excepted) amounts to 1·552 or 761 cents.

The drum beats immediately follow the note to which they belong. They recur irregularly in the opening phrases of the song, but soon take on a regular rhythm, only quickening during the *glissando* descents which are accompanied by a very rapid succession of drum beats.

Song V. This song, at first limited to the two notes c', d', contains a descending *glissando* through a fifth from c' to $f°$. The song ends on $e°$. Thus the notes composing the song are $e°$, $f°$, $g°$, c', d'. The intervals could not be accurately determined. The drums are beaten with fairly regular rhythm, quickening on the last note to a rate of about three beats per second.

Song VI. The essential feature of this song consists of a descent through an approximate fifth, $f°\sharp$ to $B_\circ$, with the insertion of the intermediate tones $e°$ and $d°$. The tune then rises to the octave $b°$, falls abruptly to the lower $B_\circ$, and ends by repeating the previous sequence $f°\sharp$, $d°$, $B_\circ$, the common chord of our minor scale. These three important notes $f°\sharp$, $d°$, $B_\circ$ form the following downward intervals:

	$f°\sharp$—$d°$	$d°$—$B_\circ$
Verse I.	1·264 or 406 cents	1·200 or 316 cents
Verse II.	1·263 or 404 cents	1·236 or 367 cents

Thus the average values of the intervals amount to 405 and 342 cents, comprising a large fifth of 747 cents.

The scale composed of the notes of this song runs $B_\circ$, $d°$, $e°$, $f°\sharp$, $b°$.

Song VII. In this curious song, after a prolonged dwelling on $f°$, relieved by two turns, there is a *glissando* rise from it through a major third to $a°$ with a fall of a major sixth from $a°$ to $c°$, and hence to $B_\circ$, the final and fundamental note[1] of the song. The important intervals and their values are thus:

	$f°—a°$	$a°—c°$	$c°—B_\circ$
Verse I.	1·233 or 362 cents	1·710 or 929 cents	1·051 or 86 cents
Verse II.	1·244 or 378 cents	1·672 or 890 cents	?

Their average values in cents are 370, 910 and 86 cents respectively.

The scale composed of the notes of this song runs $B_\circ$, $c°$, $d°$, $f°$, $a°$.

Song VIII. This is an extremely simple song, the note $f°$, adorned with turns, being prolonged until the end of the song which ends by a descent of a fifth on the lower $B_\circ\flat$. We have therefore only the interval $f°—B_\circ\flat$ to consider. The vibration-ratio of these two notes is exactly 3 : 2. The ratio is consequently 1·5, equivalent to 702 cents.

Song IX. The tones used in this song are $B_\circ\flat$, $c°$, $d°$, $f°\sharp$, $g°$. It starts from $d°$, rising to the fourth $g°$, and then descending through $f°\sharp$ to $d°$, whence it descends by two further whole-tone intervals to $c°$ and $B_\circ\flat$. The notes form a pentatonic scale, the fourth and seventh being omitted. The actual pitch of these five notes, $B_\circ\flat$, $c°$, $d°$, $f°\sharp$, $g°$, was 226, 256, 284, 352, 380 vibrations per sec. respectively. The intervals which they successively form are:

	1·133	1·109	1·239	1·080	
Equivalent to	216	179	371	133	cents

All these intervals (if the unimportant grace notes be excluded) are actually sung in the song. In addition to these, there is the interval of a fourth from $d°$ to $g°$, the ratio of which is 1·338, equal to 504 cents.

The intervals of the scale, reckoned from the final and fundamental note $B_\circ\flat$ as zero, have the values:

0 216 395 766 899

Song X. The important intervals in this song are the ascent from the prolonged note $c°$ to the fourth $f°$, and the descent from $c°$ through whole tones to $A_\circ\flat$. The values of these intervals are 1·339, 1·255, equivalent to 505 and 393 cents respectively.

The notes used in this song run $A_\circ\flat$, $B_\circ\flat$, $c°$, $f°$. The notes of this scale are identical with four of the five in Song IX.

Song XI. Here as in Song IX the scale is pentatonic, consisting of $f°$, $g°$, $a°$, c', d', if we except the once-occurring grace note e'. As in that song, the fourth and seventh

[1] So little feeling for tonality exists in these songs that the word "tonic" in the sense of "keynote" would be out of place.

are wanting, and the lowest tone is the final note of the song. The intervals, however, between the third and fourth, and the fourth and fifth notes of this scale, are somewhat different. Structurally it consists in a play on the notes d', c', repeated a fifth below on the notes $g°$, $f°$.

The important intervals used are d'—c', c' to $g°$, $g°$ to $a°$, $g°$ to $f°$. The actual pitch of the tones $f°$, $g°$, $a°$, c', d' used is 176, 196, 220, 268, 304 vibrations per sec. The intervals which they successively form are consequently:

	1·114	1·123	1·218	1·135
Equivalent to	187	200	342	220 cents

or reckoned from the lowest tone $f°$: 0, 187, 387, 729, 949 cents.

The interval c' to $g°$ which occurs in the song has the value of 1·367, equivalent to 542 cents.

Song XII. Here again the melody consists of five notes A_o, $c°$, $d°$, $f°\sharp$, $g°$. It includes the ascent of a fourth d'—g', the descent of a fourth $d°$—A_o, the descent through a major third $f'\sharp$—d', and of a minor third $c°$—A_o. The record, however, was too feeble for these intervals to be determined exactly.

The song opens, like Song IX, with the ascent of a fourth, and, like it, makes use of the tone below the initial note, but it ends on the fourth instead of on the major third below the latter.

Song XIII. The notes of this song also were not determinable with accuracy. It begins on $g°\sharp$ and, after alternating for some time between $g°\sharp$ and $a°$, descends from the former abruptly through a fifth to $c°\sharp$, rises suddenly again to the $g°\sharp$ and descends by a run of notes once more through a fifth to $c°\sharp$ on which the song ends, after touching on the note $b°$. The important notes employed are

$$c°\sharp,\quad g°\sharp,\quad a°,\quad b°.$$

Song XIII A. This song has $d°$ as its important note. As in Song XII it descends from $d°$ to a fourth below it, viz. $a°$. It also contains the notes $e°$ and $f°$.

Song XIV. The tones used in this song are B_o, d^c, $e°$, $f°\sharp$, $g°$, $a°$ and the octave $b°$. It consists of two descents through a fifth, the first from $b°$ to $e°$ with an intermediate pause on $g°$; the second, instead of starting from $b°$, starts from a fourth below it, i.e. from $f°\sharp$ to B_o with an intermediate pause on $d°$. Thus in each case the descent through a fifth is divided into intervals of a major followed by a minor third[1].

The interval $b°$—$e°$ has a ratio of 1·488 or 688 cents, which are subdivided into thirds of 379 and 309 cents respectively.

The interval $f°\sharp$ to B_o has a ratio of 1·525 or 730 cents. The pitch of d^c could not be accurately determined.

The octave appears true; consequently the interval $e°$—$f°\sharp$ may be deduced—218 cents.

[1] The breath mark after the crotchet $f°\sharp$ at first sight suggests the analysis of a fifth followed by a major third. But when I heard the song, it certainly conveyed to me the construction given above.

Song XV. The remaining songs are of more elaborate form than any of the preceding, and in some of them, as I have said (p. 239), we may possibly suspect foreign influence. Song XV is of this kind. It consists of two descents through a major sixth, the tune starting on d' and descending from e' to $g°$, and then rising a whole tone; whereupon precisely the same phrase is repeated a fourth lower, starting from $a°$ and descending from $b°$ to $d°$, ascending to $e°$. It then ascends from $e°$ through $g°$ to the fifth $b°$, descending from $d°$ to $g°$. The song, after alternately dwelling on $g°$ and $a°$ and descending to $e°$, ends on the fairly well-marked tonic $g°$. Hence the important notes in this song are $g°$, $a°$, $b°$, d', e', a scale which we have already met with in Songs IX, X and XI.

The first major sixth has a ratio 1·675, equivalent to 893 cents; the second major sixth has a ratio 1·648, equivalent to 865 cents. The interval of 893 cents is made up of the four intervals of 207, 334, 155 and 197 cents. The $f°\sharp$ in the second major sixth could not be determined. The first and last of the four intervals making up the second major sixth measured 187 and 185 cents. Hence the average values of the intervals between the notes of the above scale appear to be:

$g°$		$a°$		$b°$		d'		e'
	197		171		334		196	

or starting from $g°$ the values are 0, 197, 368, 702, 898 cents.

The descent from $a°$ to $e°$ near the close of the song amounts to 556 cents, the final descent from $a°$ to $g°$ to 181 cents.

Song XVI. To many this song, like the last, will appear to bear suspicious traces of European influence. Despite its more complex form, however, it retains many of the leading characteristics observable in the majority of purely Miriam songs. The descent to a minor seventh from $e'\flat$ to $f°$ is the most striking feature of the tune. It is followed by a twice repeated descent through two (?) minor thirds.

Song XVII. Here we meet with the same pentatonic scale as occurs in Songs IX, X, XI and XV. If the final note $a°$ be accepted as a basis, the scale runs

	$a°$		$b°$		$c'\sharp$		e'		$f'\sharp$	
with intervals of		203		213		278		202		cents

These values reckoned from $a°$ become 203, 416, 694, 896 cents.

The important intervals used are $f°\sharp$—$a°$, having a ratio of 1·192 or 304 cents; $f°\sharp$—$c'\sharp$, with ratio 1·516 or 720 cents; $c'\sharp$—$f'\sharp$, with ratio 1·319 or 480 cents.

The song starts by the ascent of a fourth to $f'\sharp$, whence the tune descends through e' to c', and thence a second phrase starts through $b°$ and $a°$ to the fifth below $f°\sharp$, ending on $a°$.

Song XVIII. This song has clearly $e°$ as its tonic. It employs the tones

$e°$		$f°\sharp$		$a°$		$b°$		$c'\sharp$	
	174		353		202		162		cents

These values reckoned from the tonic as zero become 174, 527, 729, 891 cents.

The song also starts by the twice repeated ascent of a fourth, from b° to e', of 507 cents, followed by a return to b° and the notes $c'\sharp$, b°; whereupon a descent of a major sixth is sung from $c'\sharp$ through b°, a°, $f^\circ\sharp$ to e°, which is thrice repeated.

6. Deductions from the Analyses[1].

The range of the Malu songs is ill-defined. In most of these songs it amounts to an approximate octave, but frequently it depends on the will of the singer or on the limitation of the compass of his voice.

The range of the remaining fifteen songs is shown in the following table:

Keber Songs.

Song	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XIII A.
Range	min. 7th	octave	min. 7th	5th	maj. 6th	maj. 6th	maj. 6th	min. 7th	min. 7th	maj. 6th

"Secular" Songs.

Song	XIV.	XV.	XVI.	XVII.	XVIII.
Range	octave	maj. 9th	maj. 9th	octave	octave

Hence the average range of the medieval songs lies between a major sixth and minor seventh, while the range of the modern songs is appreciably greater, averaging a minor ninth.

Of the five Malu songs, numbers I, II and IV are in many respects similar. They are made up of a descending series of notes, each approximately a whole tone apart from its neighbour. In Songs I and II the object appears to be to descend until the song can be begun again on the same note as that with which it started originally. In this sense the initial note of the song may be styled the "tonic." We may then, perhaps, regard these songs as shewing a very primitive effort in the direction of tonality. But except for the purpose of restarting the song the tonic appears to have little or no influence. The successive intervals appear to be formed regardless of it. In one song the octave is divided into six, in the other into five intervals. Songs III and IV A are possibly of later date than the other three; they are certainly somewhat different in character. In III there is more distinct evidence of tonality, in IV A there is little or none, while in both songs there are ascending as well as descending intervals and well-marked *glissando* descents. Song IV A is noteworthy for the alternating ascents through a fourth and descents through a fifth, and for the twice repeated phrase with which it opens.

The following table gives the probable values in cents of the intervals actually sung in these five songs:

I.	173	196	224		
II.			? 227		
III.	167	190			
IV.	167		219		
IV A.		195		534	761

[1] I wish to express my indebtedness to Mr A. H. Fox Strangways, who has very carefully read the proof-sheets, for various criticisms, many of which I have gladly availed myself of.

It will be noted that the interval of 534 cents closely corresponds to three intervals of 172 cents, and that it is separated by 227 cents from the interval of 761 cents. We may perhaps suppose, therefore, that the important intervals sung in these songs are (i) a distinctly flat whole tone, (ii) a slightly flat whole tone, (iii) a distinctly sharp whole tone, (iv) a distinctly sharp fourth, (v) a very sharp fifth. No interval less than about 170 cents, i.e. no interval approaching the size of our semitone, occurs in these songs.

Coming now to the *keber* and "secular" songs, I have calculated the total number of intervals used in each song of these two groups. I have omitted from this calculation the prime (i.e. no interval), rapid turns and unimportant grace notes. The following table gives the results:

	total number of intervals	average per song	ascending intervals	descending intervals	ratio of asc. to desc. int.
In the 10 *keber* songs	60	6	19	41	1 : 2·2
In the 5 "secular" songs	74	15	28	46	1 : 1·6
In all 15 songs	134	9	47	87	1 : 1·9

Hence there appears to be a distinct tendency in the more modern or "secular" music to increase the number of intervals in each song, and perhaps to increase the relative frequency of ascending intervals, although in both groups of songs the descending intervals preponderate—a feature which is, of course, still more marked in the five Malu songs.

Pursuing our analysis of the ascending (*a*) and descending (*d*) intervals in the above fifteen songs still more closely, we obtain the following table:

	minor seconds		major seconds		minor thirds		neutral thirds		major thirds		fourths		fifths		sixths		octaves	
	a	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*
In the 10 *keber* songs	3	7	8	19	0	0	1	3	0	4	5	3	1	3	0	1	1	1
In the 5 "secular" songs	0	0	12	23	2	4	2	9	0	1	6	3	0	0	2	2	1	0
In all 15 songs	3	7	20	42	2	4	3	12	0	5	11	6	1	3	2	3	2	1

From this table[1] we conclude that a further tendency of the modern or "secular" music in Murray Island is to discard the use of fifths and greatly to favour the use of thirds, whereas it eschews intervals approximating to a semitone. We also note that the only intervals which occur more frequently in ascent than in descent are the fourth and the octave. It will be remembered that of the Malu songs Song IV A alone[2] contains intervals appreciably greater than a whole tone, and that one of the striking features of this song consisted in its repeated ascents through fourths.

We may now proceed to compare the various scales which have come to light in our analyses of the records. The material, i.e. the notes of which the air of a given song is composed, when arranged in order of pitch, forms such a scale. As there is good reason to believe that the intervals of the scale were added to from above downwards,

[1] As it was impossible to determine the size of the seven thirds in Song XVI, they are omitted from the table.

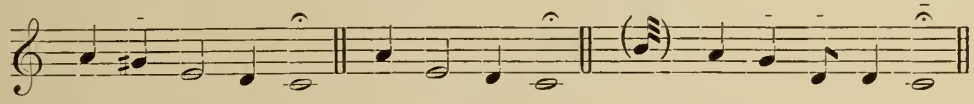
[2] I here exclude the indeterminate *glissando* at the close of Song III.

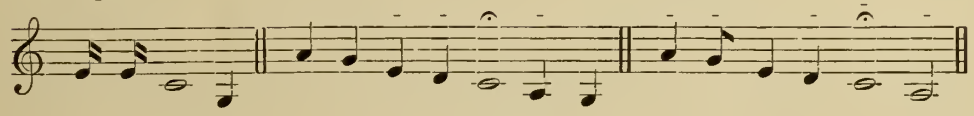
they are represented below in descending order. The following methods and signs have been found useful.

The "basal" (usually the fundamental) note is transposed to *c*, and is indicated by the value . Notes having an importance almost equal to the basal note are written . Notes of little or no importance are written , , or .

Five of the songs are evidently in the same scale:

Song IX. Song X. Song XI.



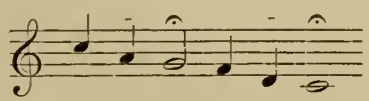
Song XIII A. Song XV. Song XVII.

The notes, constituting the material of these six songs, obviously form the familiar pentatonic scale of *c, d, e, g, a*. The values of the intervals in cents for five of the above six songs are here given:

Song	*c—d*	*c—e*	*c—g*	*c—a*
IX.	216	395	766	899
X.	—	393	—	898
XI.	187	387	729	949
XV.	197	368	702	898
XVII.	203	416	694	896
Average	201	392	723	908

In other words, the distances between the successive intervals

	c	—	*d*	—	*e*	—	*g*	—	*a*	—	*c*
amount to	201		191		331		185		292		

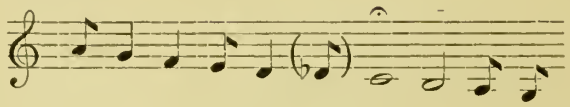
It will be convenient to call this series of notes Scale I A. The notes *c, d, g, a* of this scale also occur in Song XVIII, but here *f* occurs instead of *e*. We may call this scale of *c, d, f, g, a* Scale I B; it is based on a descent through two consecutive fourths *c—g, f—c*:

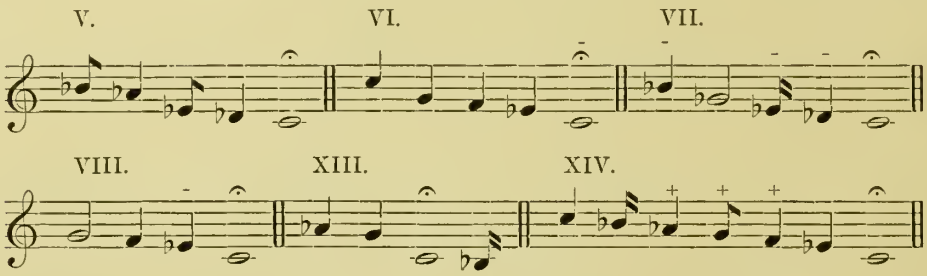


A further development occurs in Song XVI, which contains not only the six notes comprised in Scales I A, I B, but also the remaining note *b*, which is needed to make a scale corresponding to the Lydian mode[1] or to our major heptatonic scale.

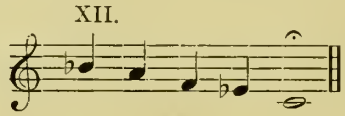
[1] In speaking of modes, I always employ the ancient Greek, not the ecclesiastical (Gregorian), nomenclature. It will be remembered that the Greek terms "Dorian," "Phrygian" and "Lydian" correspond respectively to the ecclesiastical "Phrygian," "Dorian" and "Ionian."

This we may term Scale I:



Let us now turn to six of the remaining songs, viz. V, VI, VII, VIII, XIII and XIV. In VI and VIII we find a scale of the notes *c*, *e♭*, *f*, *g*. In XIII the scale runs *c*, *g*, *a♭*, *b♭*, in V it runs *c*, *d♭*, *e♭*, *a♭*, *b♭*, and in VII *c*, *d♭*, *e♭* (*g♭* =) $\bar{g}$, *b♭*.

Combining these, we get the Dorian scale *c*, *d♭*, *e♭*, *f*, *g*, *a♭*, *b♭* (Scale II), all of which notes (if we admit the once-occurring grace note *d♭*) occur in XIV. Of these seven notes the *d♭* occurs most rarely in the above six songs, while the commonest notes are *c*, *e♭*, *g*, *b♭*, the interval between successive pairs being a minor third.

There remains Song XII, which makes use of the notes *c*, *e♭*, *f*, $\underline{b♭}$ of Scale II, but in which *a♮* takes the place of *a♭*, a change comparable to that from the Dorian to the Phrygian mode (Scale III):



We have thus five scales on which these songs are constructed, the first two of which are contained in the third:

Scale I A.	*c*	*d*	*e*		*g*	*a*			in Songs IX, X, XI, XIII A, XV, XVII.
„ I B.	*c*	*d*		*f*	*g*	*a*			in Song XVIII.
„ I.	*c*	*d*	*e*	*f*	*g*	*a*	*b*		in Song XVI.
„ II.	*c*	*d♭*	*e♭*	*f*	*g*	*a♭*	*b♭*		in Songs V, VI, VII, VIII, XIII, XIV.
„ III.	*c*		*e♭*	*f*		*a*	*b♭*		in Song XII.

It will be noted that, with the exception of Song XIV which, I suspect, was once a *keber* song, all the songs belonging to Scales II and III are *keber* songs, while with this exception all the "secular" songs occur in Scale I (including I A, I B). It would therefore appear that in Murray Island the "major" scales[1] are far more often used in the secular songs than are the "minor" scales. At first sight this seems to contradict the conclusion reached on p. 256 that not one of the *keber* songs contains

[1] I use the terms "major" and "minor" scale for convenience here merely to denote the scales in which the third above the basal (usually = fundamental) tone is major or minor.

the interval of the minor third, while this interval is quite common in the secular songs and the major third occurs in both groups of songs with equal frequency. A moment's consideration, however, will make it evident that a song in the major scale may contain a great number of minor third intervals, while a song in the minor scale may contain a great number of major third intervals. Moreover, it must be remembered that we are applying the terms "major" and "minor" scales to songs in which no definite tonic is generally recognisable.

Let us now determine the frequency with which these several notes (c, $d\flat$, d, $e\flat$, e, f, g, $a\flat$, a, $b\flat$, c') occur in the above fifteen scales derived from Songs V—XVIII. We find

c	occurring	in	15	scales
g	,,	,,	12	,,
a	,,	,,	8	,,
e	,,	,,	7	,,
f	,,	,,	6	,,
$e\flat$	,,	,,	5	,,
$b\flat$	,,	,,	4	,,
$a\flat$, $d\flat$, and c' (each)	,,	,,	3	,,

It is remarkable that the note b (forming the major seventh) does not occur in any of these fifteen scales[1]. Of the notes which lie below the basal c we find

a	occurring	in	3	scales
g	,,	,,	3	,,
b and $b\flat$ each	,,	,,	1	,,

Thus the order of frequency of the intervals in these scales appears to be (i) fifths, (ii) sixths, (iii) fourths and thirds, and (iv) minor sevenths.

It must be remembered that this order does not express the frequency of the intervals actually sung in the Songs V—XVIII. It has been obtained by finding the material (i.e. the different notes) of which each song is composed, by transposing the "basal" note of each song to c, by massing all the notes thus obtained into a general scale, and by calculating the order of frequency with which the notes of this general scale, thus obtained, appear in the special scales of the individual songs. If, on the other hand, we wish to determine the frequency of the various intervals actually sung in these fourteen songs, information on this point is readily yielded by the table which has been given on p. 256. The order is as follows: major seconds, thirds, fourths, fifths and sixths, octaves. In other words, the frequency with which the various intervals occur varies directly with their size. The striking exceptions to this rule are the minor seconds, which rank in order of frequency after the fourths.

A point of considerable historical interest is affected by these calculations. Whether the fourth or the fifth is the earlier interval used by primitive man has always been a subject of keen controversy. Some writers have gone so far as to state that the descending fourth was the first of all intervals, and that it was subsequently divided and added to. Others have urged that inasmuch as the fifth is by far the more

[1] In Scale XI it occurs as a quite unimportant grace note which naturally is not to be reckoned as a scale note.

consonant interval, it must have preceded the fourth in date of evolution. So far as the Murray Islanders are concerned, a direct answer may be given to this question.

For a glance at the ancient Malu Songs I—IV A (p. 244) shews that the earliest tones to originate correspond approximately to our major second, that the initial tone was throughout vaguely borne in mind, acting as a rudimentary tonic, and that when the performer had sung through an octave of descending tones he began the song once more. We can also see that the next interval (after the major second) to occur was a fourth, which probably was employed in descent earlier than in ascent; then came the fifth used in descent only. Turning now to the *keber* and "secular" songs we see the same order, viz. major seconds, fourths and fifths, with the important interposition of the thirds between major seconds and fourths, the addition (in diminishing frequency of occurrence) of sixths and octaves, and the increasing frequency of ascending intervals.

But, as we have seen on p. 256, the songs, regarded as a whole, shew the clear origin of their melody and their intervals in the natural fall or "cadence" of the voice. There is a descent from a high tone to one which, as time goes on, becomes more and more distinctly recognised as the tonic, and larger intervals first arise as the result of a fusion of smaller ones. Thus the fourth apparently arose as a "tritone" (i.e. as a synthesis of three approximately whole tones), at all events when sung as a descending interval. For the descending fourths sung in Songs IV A, XI, and XV measure 534, 542, 556 cents respectively. On the other hand when the fourth begins to be sung from below upwards, it closely approaches our ordinary fourth, e.g. in Songs IX (504 cents), X (505 cents), XVIII (507 cents). Probably the fifth was subsequently hit upon in the same way, at first undetermined by any harmonic relations. In relation to this tonic, the tone which is a fourth above it comes to play a less prominent part than that which is a fifth above it (p. 259).

We conclude, then, that there is good reason to believe that in Murray Island the use of the fourth preceded that of the fifth, but that with the development of the tonic, the note which is a fifth above it is more often used than that which is a fourth above it. Further, the tonic is almost invariably the lowest note in the melody and its upper octave rarely occurs. Hence it is impossible to consider the fifth to have arisen from the relation of this upper octave note to the note a fourth below it. We are bound to see here the rudiments of a harmony dependent on the greater consonance of fifths over fourths, despite the fact that the Murray Islanders never hear the intervals as literally "consonant" (i.e. sounding simultaneously) during their songs. They always sing in unison. That they use the note a fifth above, more frequently than they use the note a fourth above, the tonic, can only be due to an incipient sensibility to the dictates of harmony.

7. Summary.

As a whole, the songs of the Murray Islanders are very primitive. There is little attempt at divisions into phrases, and scant feeling for tonality. The smallest interval sung is rarely much less than a whole tone. It is certain that quarter tones fail to find any place in Miriam music. There is moreover a striking absence of that regard

for and delight in complexities of rhythm which are often well-marked features of the music of many primitive peoples. The *tempo* is usually slow, and nearly all the tunes contain several very prolonged notes. Where, as in the Malu songs, a rhythm is noticeable, it has invariably a very simple character. But generally there is no strict rhythm, the *tempo* is distinctly *rubato*, and the music has more the character of a *récitatif* than of a melody. It is only in the secular songs that some advance from this condition has taken place.

The Malu songs bear a general resemblance to several that have been recorded in Australia, especially as regards their lax *tempo* and their relatively considerable range. Their characteristic lies in a descent through a considerable range by an indeterminate number of approximately whole-tone intervals. It is not difficult to see how this feature has been derived from a prolonged cry or wail, the natural formless expression of sorrow. For this reason, doubtless, the mournful nature of the Malu songs is so prominent. Such music is in striking contrast to that of the Veddas[1], who are also a people that have no musical instruments. Here we find a stricter and more rapid *tempo*, complexities of rhythm shewing evidence of order and method, and a much more limited material, most of their songs being made up of two or three near-lying notes.

But even in the Malu songs there is an attempt to deal musically with the material at the disposal of the singers. Even here there is often a certain contrast between an initial introductory figure and the mournful rather monotonous cadence of which the remainder of most of the songs consists.

In the *keber* songs the rhythmic element is even still more subordinate to the air, which, at times indeed, has rather the character of a *récitatif*. The tonic (in the sense, at least, of a "central" note) comes to be felt with increasing strength. Thirds and sixths make their appearance.

In the "secular" songs we find a wider range of notes, greater tunefulness, and a more obvious attempt at contrast and alternation of figures. A given phrase is, crudely enough, precisely repeated at another level of pitch. A figure of wide range of notes is followed by another of very narrow range; there has awakened an elemental but real desire for balance. The scale is almost always of a major character, commonly of the pentatonic form *c*, *d*, *e*, *g*, *a*. With the increasing material at hand, there goes, however, some increase of diffuseness and restlessness. Many of the tunes in this group are far less compact than those of the *keber* group. The air wanders on without presenting so definite a form or purpose. This diffuseness and restlessness are to be observed in a still higher degree in various songs of the western islands (p. 264) from which the words at least (cf. pp. 241, 242) of the above songs have been derived.

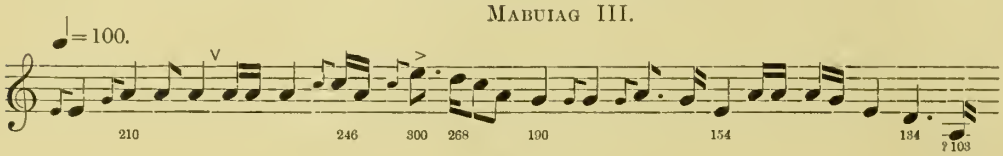
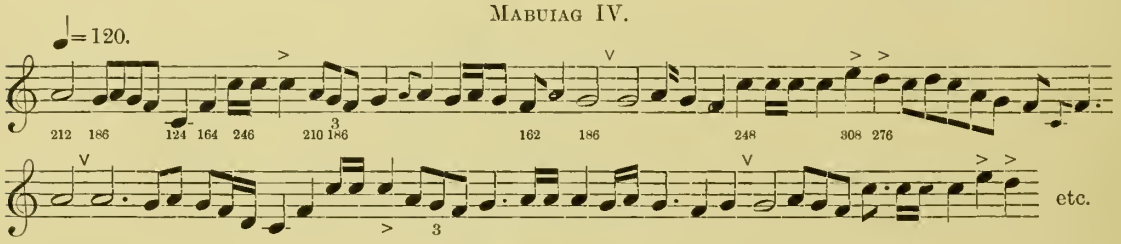
B. The Western Islands and Saibai.

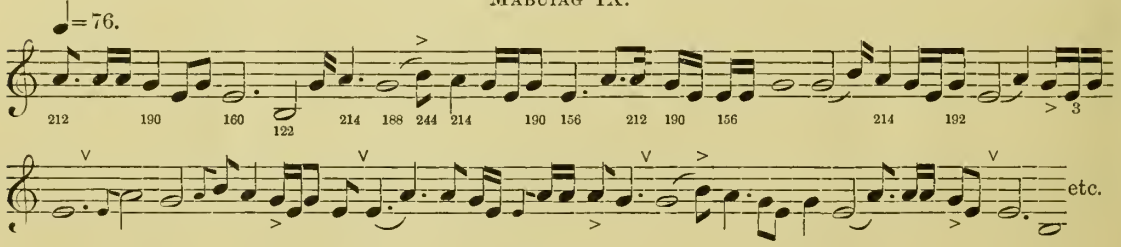
My anthropological work in the Torres Straits was confined to Murray Island. To Mr S. H. Ray, who visited other islands of the Straits, I am indebted for phonographic records of the music of Mabuiag, Yam and Saibai. He informs me that he knows nothing about the age of these songs, but from its title ("Waiat song—dance

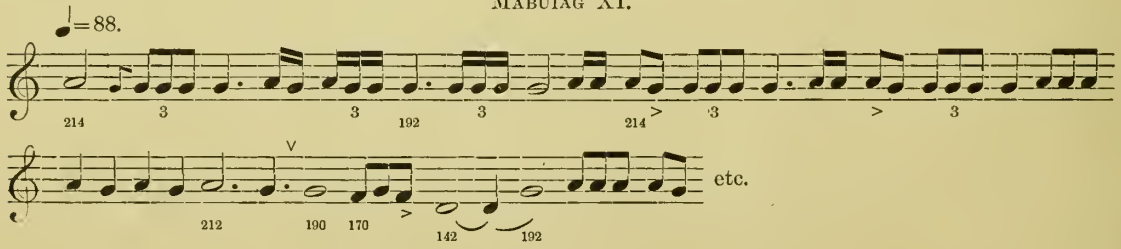
[1] Cf. the writer's chapter on Vedda music in *The Veddas*, by C. G. and Brenda Seligmann (Cambridge, 1911), pp. 341—365.

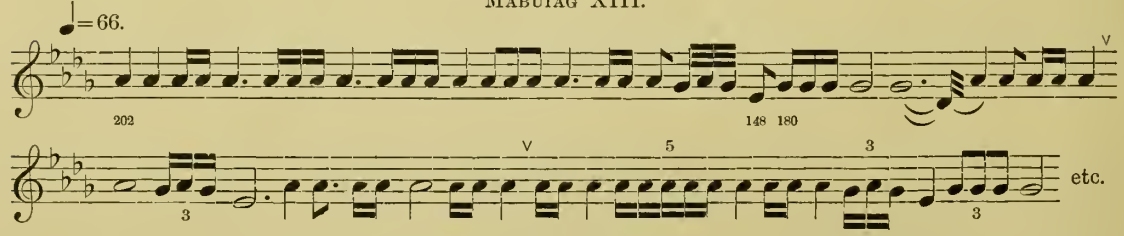
of dead men") the Mabuiag Song XI is likely to be old, and Song XIII bears the title, "Sea and island—song from Kwoiam"; probably this, therefore, is also old. Mr Ray's translation of the titles and words of the various songs of this group is given on p. 269.

SONGS FROM MABUIAG[1].

Mabuiag III.

Mabuiag IV.

Mabuiag IX.

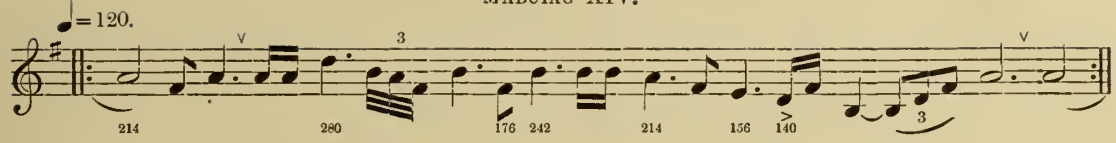


Mabuiag XI.

Mabuiag XIII.



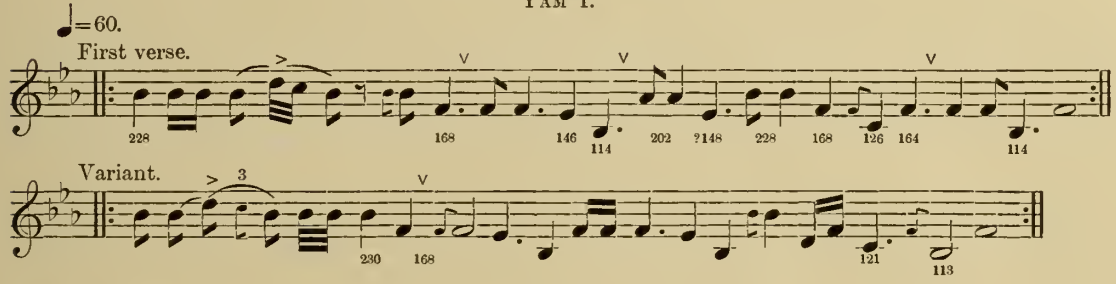
[1] I have retained the original numbering of the Mabuiag songs in the Cambridge collection. Several of the records were too faint for the songs to be transcribed. The figures underneath the notes give the pitch of the tones in vibrations per second; the signs + and − have consequently been omitted.

MABUIAG XIV.

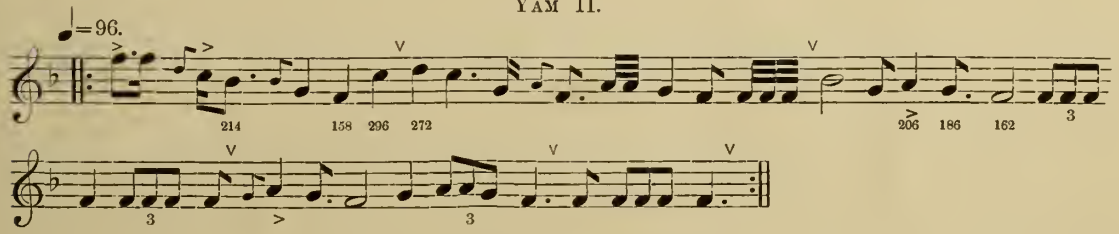


SONGS FROM YAM.

YAM I.

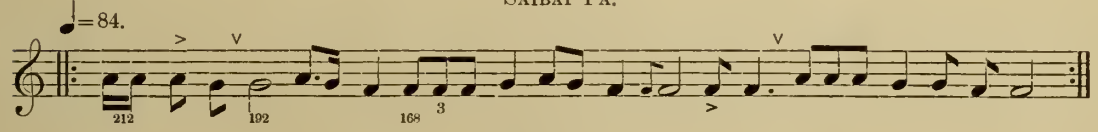


YAM II.

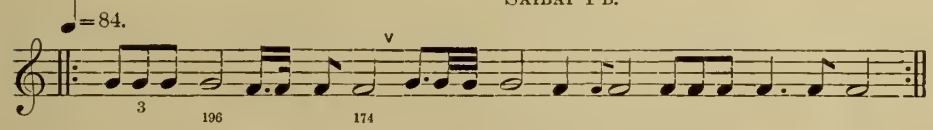


SONGS FROM SAIBAI.

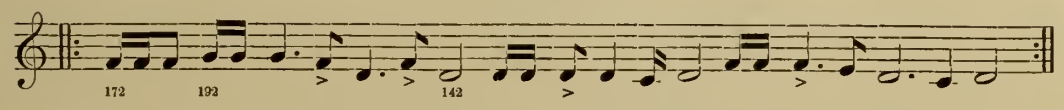
SAIBAI I A.



SAIBAI I B.



SAIBAI II.



The two presumably oldest Songs XI and XIII are distinctly simpler in character than the others of the Mabuiag group. Song XI bears a resemblance to the *keber* group of the Murray Island songs. Like Songs V, XI, XIII of the *keber* group, it

consists for the greater part in ringing the changes on two notes a whole tone apart. The rhythm is strikingly irregular and there is little feeling for tonality.

Song XIII has the characteristic *glissando*, first downward and then upward through about a fourth, with which we met in Song IV A of the Malu group. There is the same sequence of consecutive whole-tone intervals which characterises the Malu songs.

Of the four remaining Mabuiag songs, Song XIV is obviously different from the rest in its (to us) greater tunefulness and conciseness, its relatively regular rhythm, and its greater feeling for tonality. It bears a distinct resemblance to certain songs of the "secular" group of Murray Island songs, but has a range of compass (minor tenth) wider than any of those (cf. p. 255). It exhibits, however, a feature characteristic of several of those Mabuiag songs in which tonality can be detected, namely, a desire to avoid resting on the tonic. Clearly the note d° would be the natural termination of the song, but it is only momentarily sung, the melody springing up a major third and then descending a fifth.

The same avoidance of the tonic, accompanied nevertheless by a feeling for tonality, is shewn in the almost equally tuneful but less rhythmical and more diffuse Mabuiag Song IX. The main part of the air consists in a descent from b° through a° and g° to e°, the natural tonic. But the note e° seldom seems really final; the melody either descends through a fourth to $B_{\circ}$ or ascends a minor third or a fourth to g° or a°. It will be noted that the phrase, a°, g°, e°, g°, occurs also in the Mabuiag Song XIII.

The remaining two Mabuiag Songs III and IV, which are dance songs, are likewise very diffuse and of irregular rhythm. If a feeling of tonality be admitted to exist in Song IV, the tonic would probably be f°, the air being primarily built on the descending phrase a°, g°, f°. But f° provides no resting place for the melody. It at once ascends a minor third to a° or else ascends through a fifth to c'.

So perhaps in Song III the natural tonic would perhaps be e°. But it fails to provide a resting place.

In the first of the two songs from Yam there is a similar feeling of restlessness, partly owing to the inherent diffuseness of the melody, partly owing to the absence of any clear key-note. To us the song would perhaps end more comfortably on $B_{\circ}\flat$; yet the air never remains long on $B_{\circ}\flat$ but passes to the dominant f°. In the second song the sequence of descending whole tones a°, g°, f° obviously plays an important part, following a tuneful descent from f' through c', $b^{\circ}\flat$, g° to the lower octave and tonic f°.

As a whole, then, the Mabuiag and Yam songs differ from those of Murray Island in greater diffuseness, restlessness and irregularity of rhythm, and in less feeling for tonality. They are also characterised by a greater range of tones. The range of the *keber* songs of Murray Island averages, as we have seen, between six or seven tones, while the range of the "secular" songs averages between eight or nine tones. The old ceremonial Mabuiag Songs XI and XIII average only four tones, but the modern Mabuiag "secular" songs average ten tones, and the Yam songs shew a range almost as wide.

The average number of intervals ascending and descending in the Murray Island and Mabuiag songs may be compared by means of the following table:

Songs	Average number of intervals per song	Average number of ascending intervals	Average number of descending intervals	Frequency ratio of ascending to descending intervals
Murray Island "secular"	15	6	9	1 : 1·6
Mabuiag "secular"	21	8	13	1 : 1·6

A more detailed analysis of the intervals actually sung in the Mabuiag songs (comparable to the table already given on p. 256 for the Murray Island songs) yields the following data, the columns *a* and *d* referring to ascending and descending intervals:

	minor seconds		major seconds		minor thirds		major thirds		fourths		fifths		sixths		sevenths		octaves	
	a	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*	*a*	*d*
Mabuiag "secular" songs	0	0	9	31	10	15	6	0	5	3	2	1	1	0	0	0	0	0

The Mabuiag, like the Murray Island, "secular" songs make no use of the minor second, and in both islands the fourth occurs more frequently in ascent than in descent. In Mabuiag, as in Murray Island, thirds and seconds occur far more commonly in descent than in ascent. It is curious, however, to note that, in Mabuiag, the major third when it occurs (six times) is always an ascending interval, while in Murray Island it is always a descending interval. Of the wider intervals the sixth occurs but once; the octave is absent from the Mabuiag songs.

The two songs from Yam are characterised by the frequent use made of the interval of the descending fourth, and by the wide range of tones employed in the songs. The interval of a minor seventh occurs once.

In Murray Island all four "secular" songs are in the major scale. In Mabuiag two of the four "secular" songs are in the major, two in the minor scale. In Murray Island, only the *keber* songs are in the minor scale; the Mabuiag Song XI, which we have already likened to the *keber* songs, is likewise in the minor scale[1].

The three songs from Saibai stand in marked contrast to the Mabuiag and Yam songs we have been considering. They are as simple in construction as any of the Malu songs, the air consisting in the case of the first song of merely two tones g°, f°, and in the case of the second of three tones a°, g°, f°. The third song is hardly more complex, though the number of tones employed is increased to five—g°, f°, e°, d°, c°. In their simplicity and in their use solely of whole-tone intervals within the phrase, the Saibai songs resemble the Malu Songs I—IV of Murray Island. But in their general effect, particularly in their lack of rhythm and their *récitatif* character, they recall rather the *keber* group of songs.

C. General Conclusions.

We are able to divide the music of the Torres Straits into three main styles, which for convenience we may designate (i) the Malu, (ii) the *keber*, and (iii) the "secular" styles.

(i) The Malu style is certainly the most ancient of the three in Murray Island.

[1] See footnote to p. 258 for the use of the terms "major" and "minor scale" in this Section.

It pertains to the most sacred initiation ceremonies of the islanders; and as the words to which these tunes are sung are so archaic that they have lost their meaning, the extreme antiquity of this style is unquestionable. Yet even here there is a differentiation into (*a*) songs (I—IV) consisting solely of whole-tone intervals[1], and (*b*) a song (IV A) in which a pronounced *glissando* and the use of fourths and fifths are characteristic features.

Similar songs which contain only whole-tone intervals occur in Saibai. We have also met with a song (XIII), in which the characteristic *glissando* is a prominent feature, in Mabuiag; it bears the title "Song from Kwoiam," and may therefore be considered ancient.

(ii) The *keber* style doubtless originated at a later date in Murray Island than the Malu style. Both the Malu and the *keber* ceremonies appear to have been introduced from the western islands. But the *keber* ceremonies undoubtedly came later, and the songs sung in connection with them retain the words of the western language. There is one old song (XI) from Mabuiag which distinctly recalls the *keber* style. The style is generally *récitatif*, the notes are often very prolonged, and often much of the song consists in a play upon two or three near-lying tones.

(iii) The "secular" style may be subdivided into two. Both are characterised by a greater liveliness, by a greater range of tones, by increasing complexity of structure and increasing feeling for tonality. In the one, however, there is considerably greater conciseness of form and (to *our* ears) greater tunefulness and tonality than in the other, in which, on the contrary, diffuseness, an unwillingness to rest on the natural tonic, and the avoidance of large intervals, are the distinguishing features. The former of these styles is (if we may judge from our few examples) characteristic rather of Murray Island, while the latter occurs in Mabuiag and Yam. Consequently, if the Murray Islanders have borrowed their "secular" music from the Western Islanders, as undoubtedly they have borrowed the words to which they sing these songs, they have selected or altered the style of the songs according to their own taste. As has already been shewn (p. 241) they have at times invented new songs to words of the western language. Their own compositions, even if based upon the songs which have at some time been introduced from other islands, appear to have distinctive characters of their own, to which we have called attention in the course of this section.

D. Appendix. Words of the Songs[2].

Words of the Malu, *keber* and "secular" songs obtained from Murray Island.

Song I. *Wau aka o adet Maluet e padet emarer*
Yea why O holy one Malu at the creek sways.

Song II. *Wau o weluba o lewerlewer o meriba tamera*
Yea O pigeon's feather O food our Malu's club

o gulabora tamera o weii
O made of banana leaves Malu's club O alas!

[1] See second footnote to p. 256.

[2] I am indebted to Mr S. H. Ray for the attempts at translation into English; see also these *Reports*, Vol. VI. pp. 297—299.

Song III. *Wau Izib eiriam*[1], *wau Izibe dirker ewatur*
Yea Izib ye two drink. Yea Izib he sinks it pulls him down.

Song IV. *Ib' abara lewer kerim abara lewer*
Jaw his food head his food.

Followed in a whisper by the sacred words[2]:

Malu okasisi okasoksok bamsilare tabamsilare
Malu sorry sorry many are troubled many are troubled again

batapilare tabatapilare bausakilare tabausakilare
many grumble many grumble again many cut themselves many cut themselves again.

Song IV A. *Wau aka Maluet au adud leluti adud tereget*
Yea why Malu very bad man bad teeth

Warbir[1] *naukarik leluti Warbir dereble segura*
Warbir haul me out men Warbir dug out play

tuglei
stand round.

To the same air are sung:

(*a*) *Wau baurem kazi wapa baurem tabametalam*[3]
Yea to fish spear child harpoon to fish spear ?

baurem
to fish spear.

(*b*) *Wau aka Maluet uzer taurameti Warbir*[1] *naukarik leluti*
Yea why O Malu paddle sticks fast again Warbir haul me out men.

(*c*) *Wau degem kerem derapeida isemadariei*[4]
Yea bird-of-paradise head is cut off two roll it up in mat.

(*d*) *Wau galbol iaba taiawa imadari Seii*[5] *padgege ni gedgege*
Yea whales they spout here (?at) Seii in the valley fresh water in the place there.

(*e*) *Wau weduli gereb kesge otaili Seii*[5] *padgege ni gedgege*
Yea Malu's club ? in the channel ? Seii in the valley fresh water in the place there.

Followed in a whisper by the sacred words:

Malu kopa isauado naukarik leluti isaua dararager
Malu buttocks smear haul me out men smeared stick on.

[1] I have little doubt that the word Iruam is here intended. Iruam made Warbir (or Warber) which is a water-hole at Las (these *Reports*, Vol. VI. pp. 7, 283, 297), but probably the island Waraber is here confused with Warber.

[2] For the different versions of these words and their possible meaning, see these *Reports*, Vol. VI. pp. 300, 301 (footnotes).

[3] This was translated "all women are ready to carry." Mr Ray suggests in place of it *tabao metalam* = go out from house.

[4] This was said to be the "Malu word" for *itarati* = roll or fold up.

[5] Seii was the "brother" of Bomai and is also the name of the channel in the reefs between Mer and Erub.

Song V. *Kodiaba kodiaba moiaba dayata lagiaba sigapa*
To the ring to the ring to fire to place to there

sigasi akamai a ... waier babamula
from afar ? ? ?

Song VII. *Wau kubi uti sa baibai ita...*
Yea dark sleep now eyebrows cover.

Followed in monotone by:

Were were tepe were waru[1] *gedge were sidar*
sea-urchin Haliotis shell turtle on land Tellina shell

gedge were tepe were baua gedge were
on land waves on land.

Song VIII. *O meluba Dudiie*
? along Daudai.

Song XI. *O obarasa gainau teir dimer*
recognise pigeon ornament sew
tie on.

Song XII. *O Dudiaba...Gebariaba Mukeriaba tatarmauke Amiaba*
to Daudai to Gebar to Mukwa comes between to Yam.

Song XIII. *Pua pua...er pua...er* etc., *tokaiba namiedra* (? *namiadaba*)
wer a wer

Song XIII A. *O dia...ina wara si kalapudema wa waia tana abu wali*
this other there put on back along coconut they ? fishing line

guba gol mina
club canoe mark.

Song XIV. *Isia ba ba walsika O...umuru*
name of plant for for a basket plait.
(perhaps basket)

Other versions:

Umuru Kiweia naigaia
along Kiwai along north.

Isiăba malăsika[2] *isiăba terĕsika*[3] *isiăba malăsika*
? to basket go with ? to basket.
know how

Song XV. *Kolap nab ulai kolap pogaipa kolap nino wagel* (? *walgen*) *pogaipa*
Spinning top this go along top fails top yours after fails.

Song XVI. *Babim mena taiseda*
to father always brought back.

Song XVII. *Saiba ala mitge we mitge*
on lip on lip.

Song XVIII. *Iriboa kukia iriboa*
along N.W.

[1] *Waru*, if a Western word, means turtle; if not, it may be Miriam, meaning a sea bird.
[2] *Mal* may be the Mabuiag *malu*=sea. *Asika* means "go with."
[3] Probably *ter*=reef, and *asika*=go with.

Titles or words of the Songs obtained from Mabuiag, Yam and Saibai.

Mabuiag III. *Ngata kaba nau puidaik*
I dance song sing.

Mabuiag IV. *Gana sagulau nau*
Ga's play's song.

Mabuiag IX. *Korara kwiku puidaik*
? crocodile head sing.

Mabuiag XI. *Waiatana na puidaik*
Waiat's[1] song.

Mabuiag XIII. *Ur kawa*
Sea [and] island.

Mabuiag XIV. *Ngato madubau nau puidaik*
I *madub's* song sing.
(= charm's)

Yam I. *Awaia gulabwi kabutan*
pelican in canoe put.

Yam II. *Yamazi barid*
along Yam Id. cuscus.

Saibai I. *Mawa na puidam*
Mawa[2] song sing
sung.

Saibai II. *Madub na puidam*
(= charm) song sung.

[1] For Waiat see these *Reports*, Vol. v. pp. 49—55.

[2] A ceremony for insuring ripe fruit (cf. these *Reports*, Vol. v. pp. 348, 349).

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